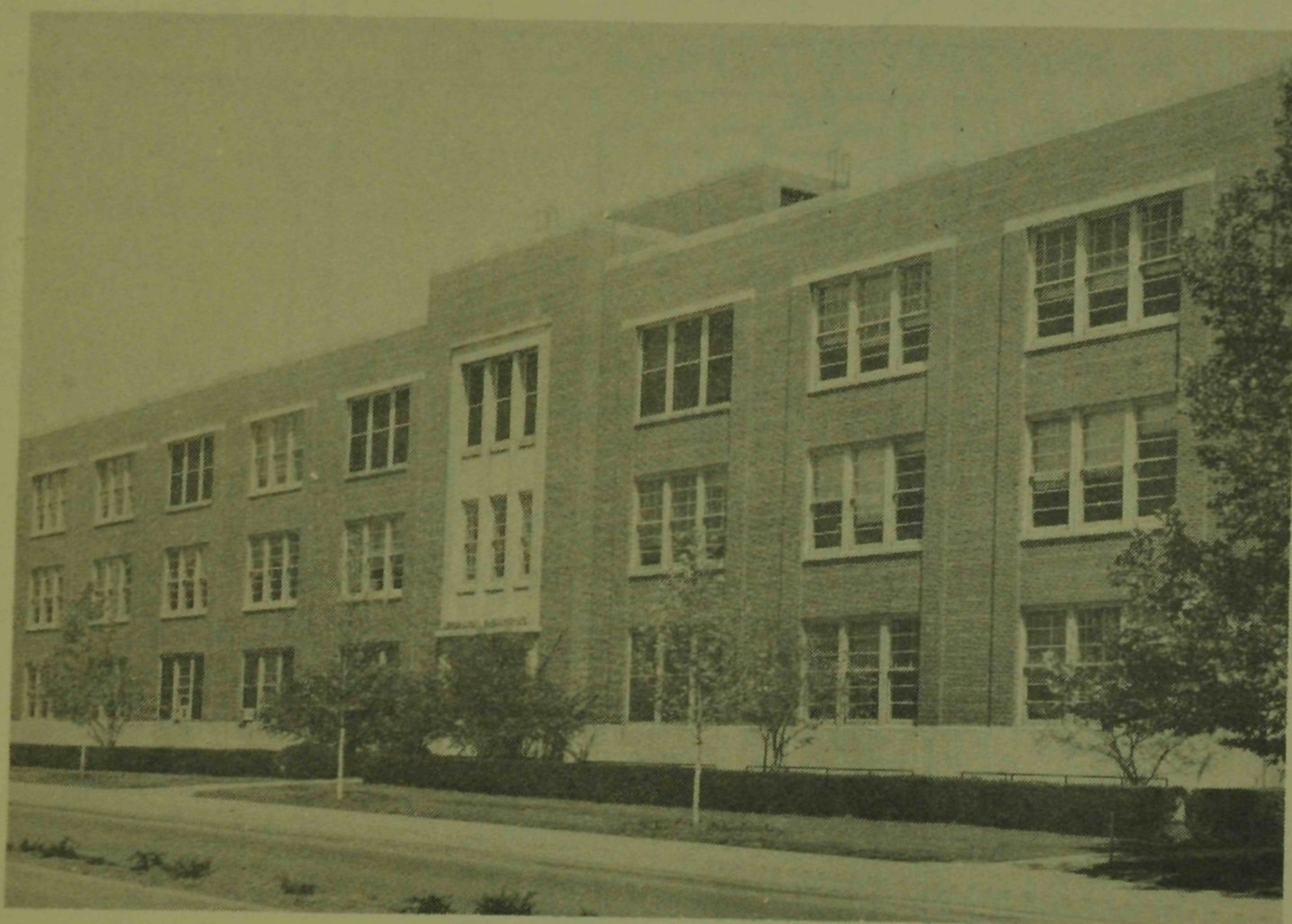


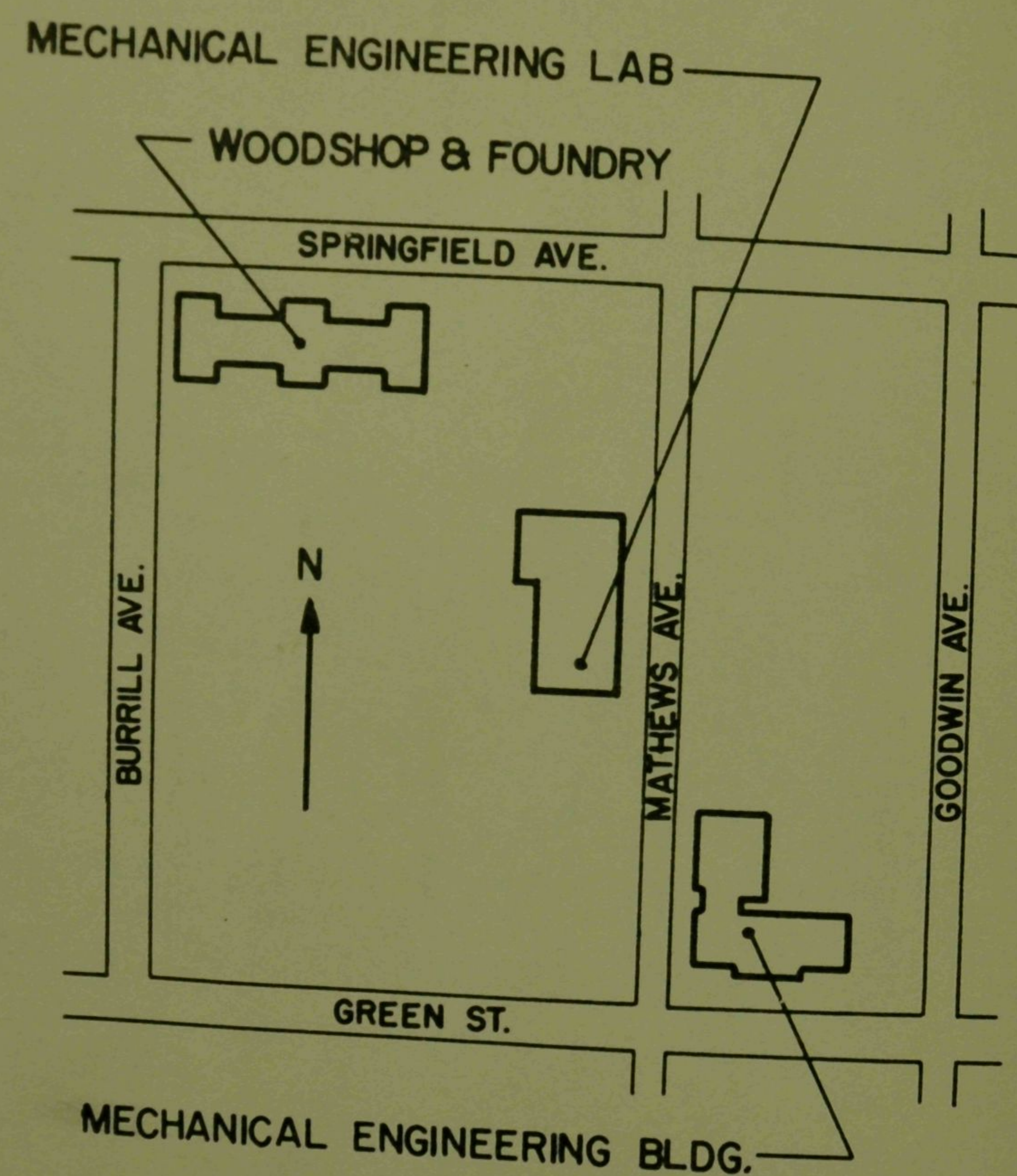
11/8

# MECHANICAL AND INDUSTRIAL ENGINEERING



**Present**  
**Engineering Open House**  
**1965**





## FACILITIES OF THE MECHANICAL AND INDUSTRIAL ENGINEERING DEPARTMENT

### FOUNDRY

The foundry is used to study the principles of metal casting. These principles include a study on the molding processes; melting and pouring practice; sand controls and testing; materials handling and mass production methods in the foundry.

### MECHANICAL ENGINEERING LABORATORY

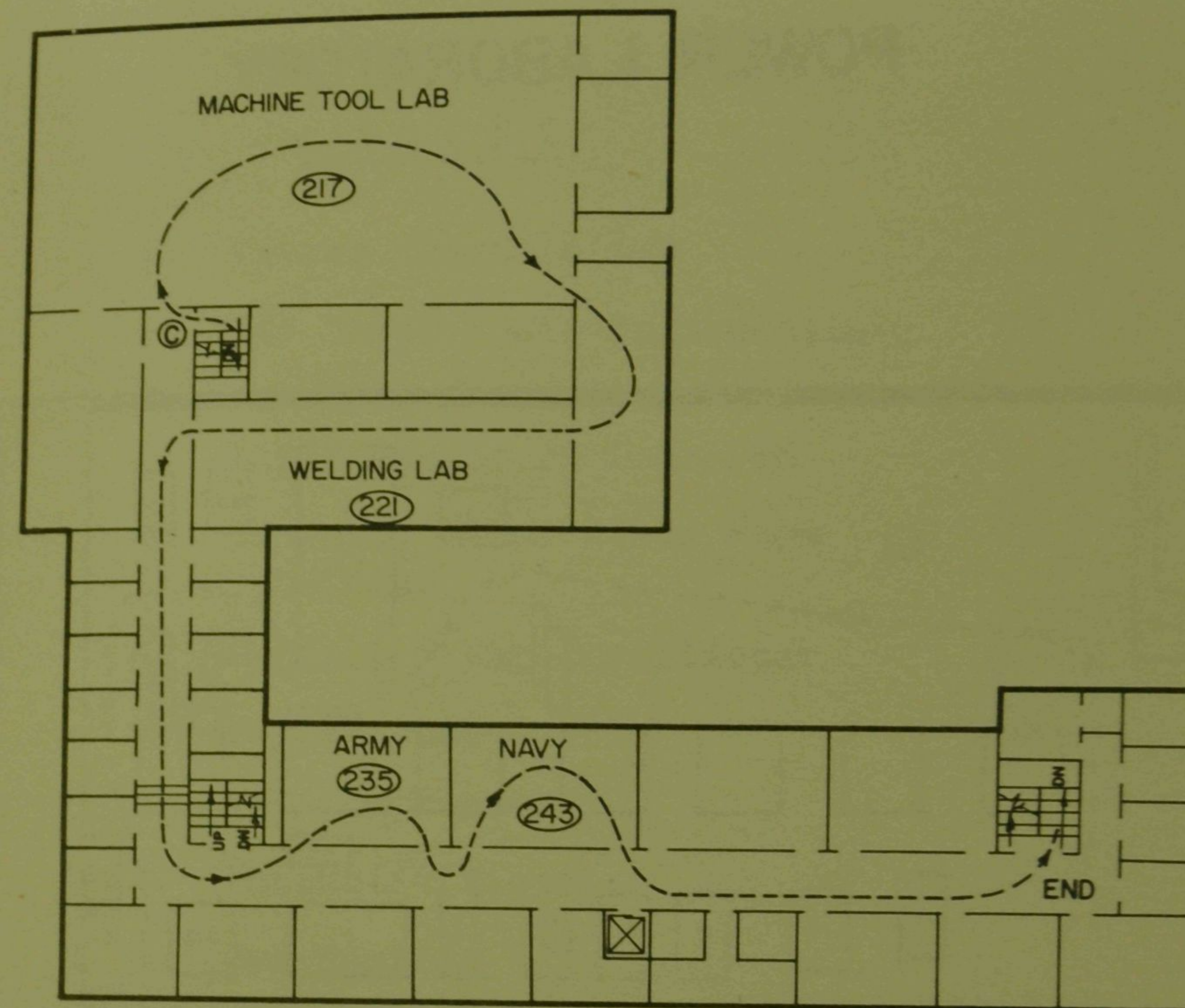
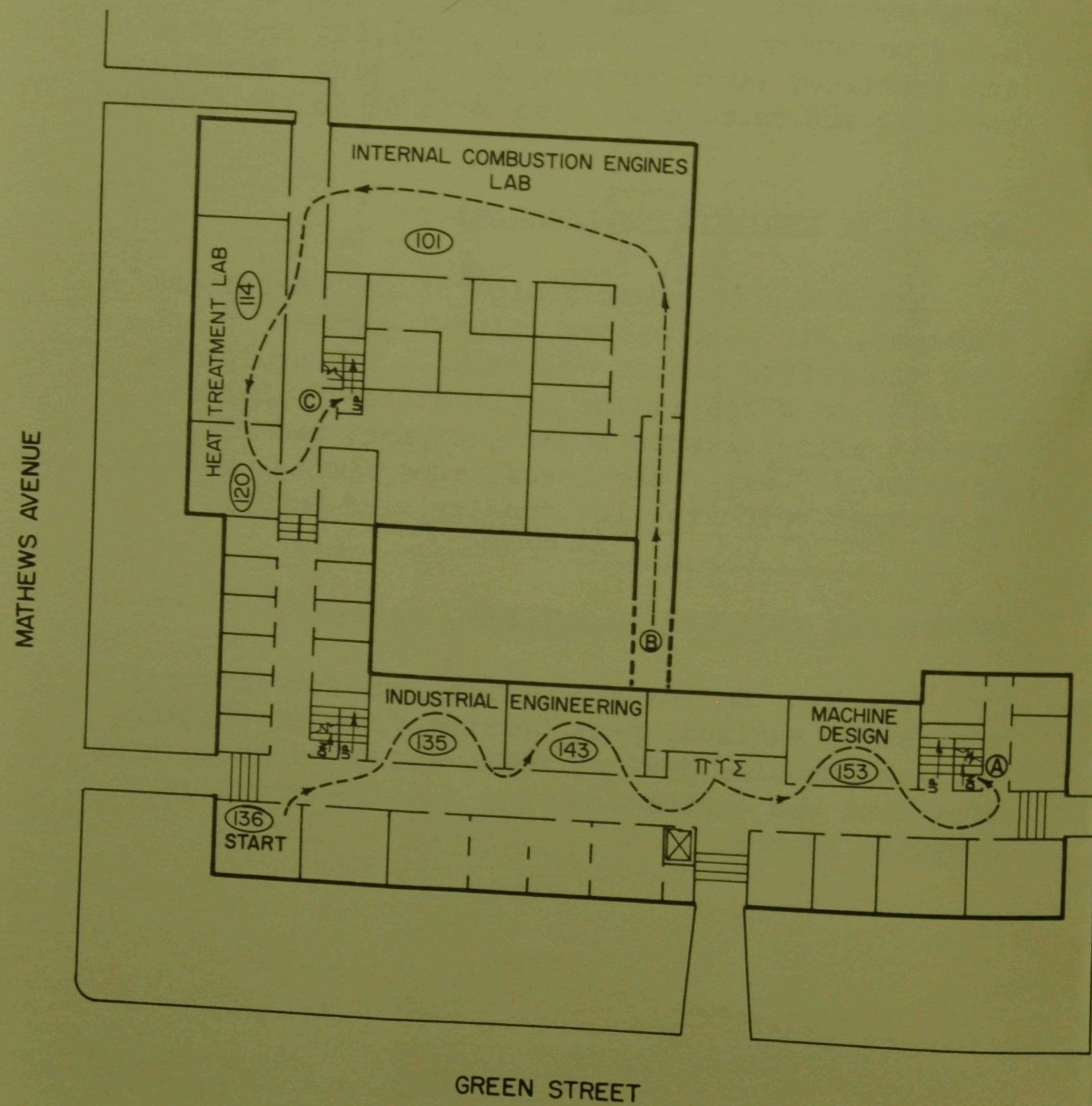
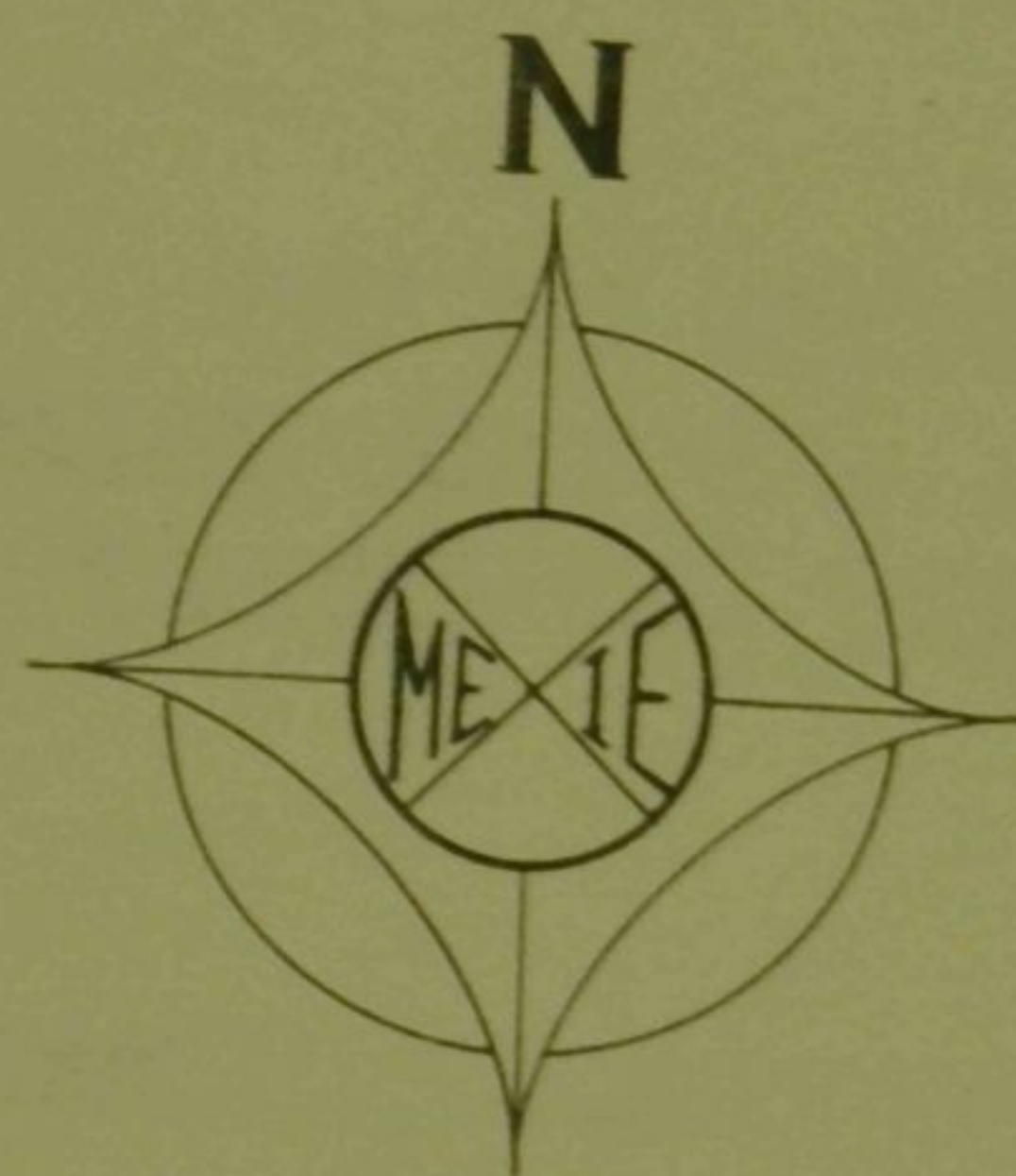
The M.E. Lab power equipment includes steam turbines, air compressors, diesel engines, pumps, fans and refrigeration equipment. The equipment in this lab stresses the application of thermodynamic principles to power equipment and flow processes. One of the newest experimental setups is a hyper-velocity, low density wind tunnel.

### MECHANICAL ENGINEERING BUILDING

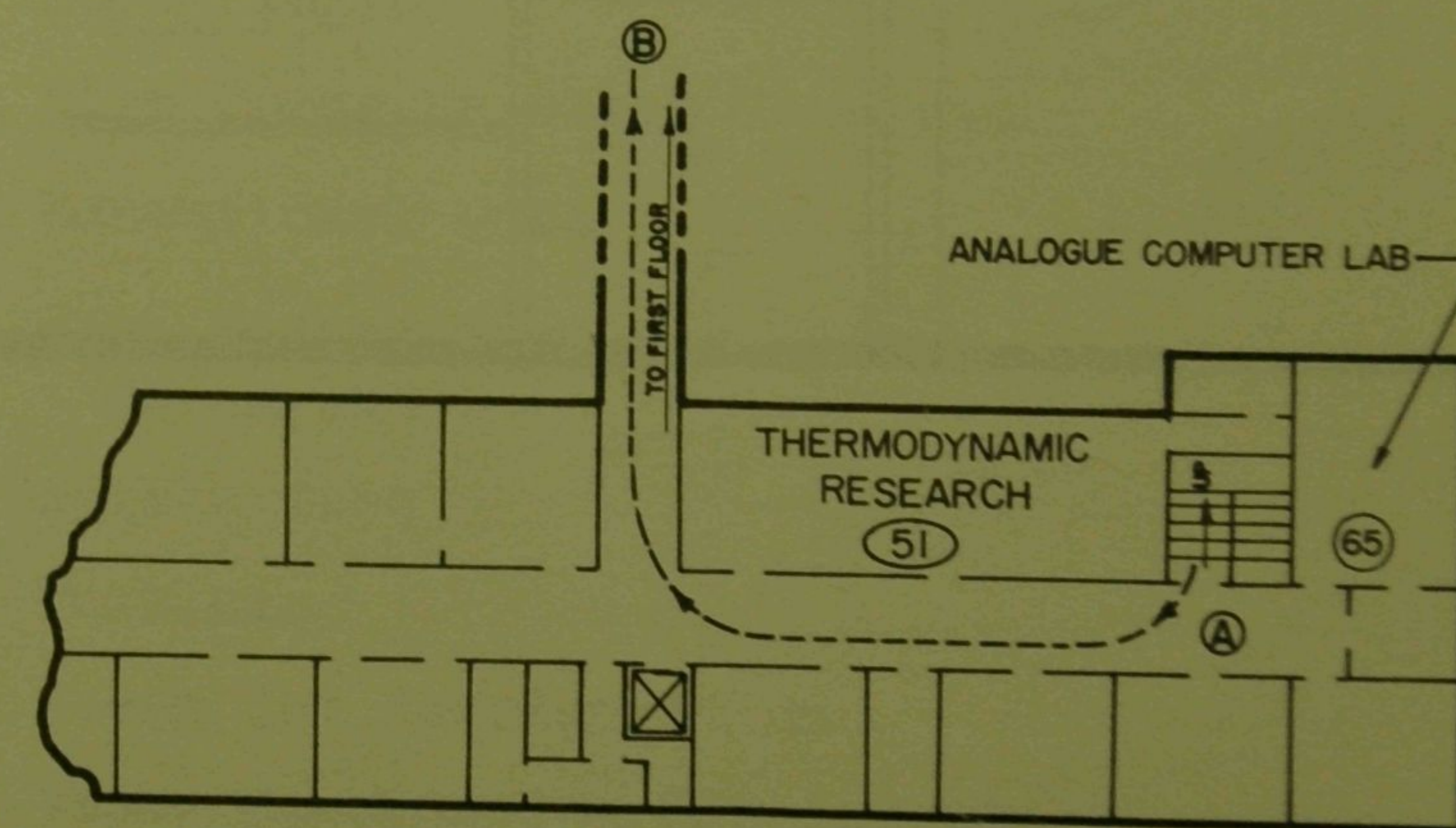
The M.E. Building contains labs for internal combustion engines, heat treatment, metal cutting, welding, machine design, fuels and lubricants, heat treatment and combustion, and a newly-installed computer center.



# MECHANICAL ENGINEERING BUILDING



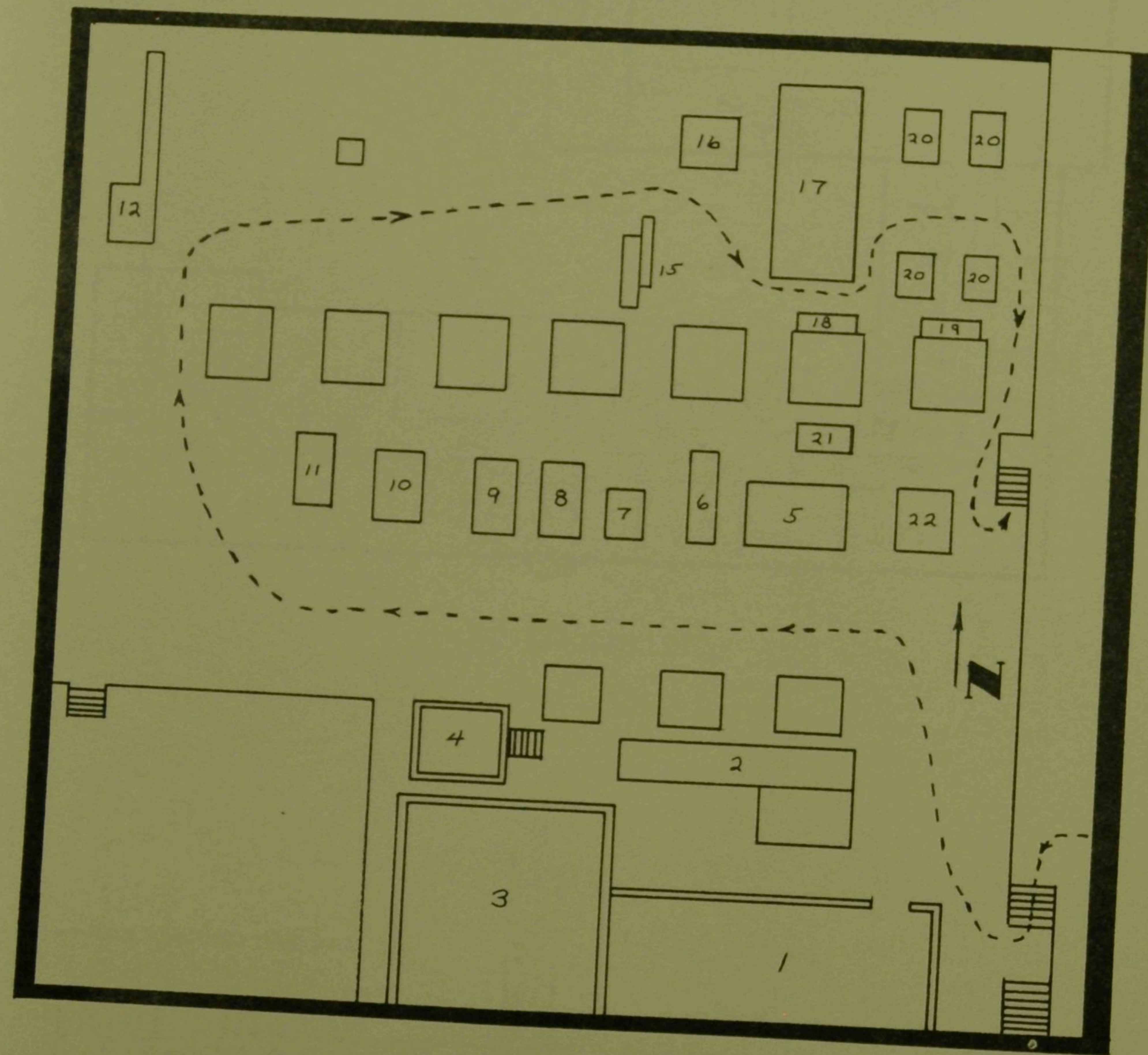
SECOND FLOOR



GROUND FLOOR



# MECHANICAL ENGINEERING POWER LABORATORY



## LEGEND

1. Thermo Research Lab
2. Air Conditioner Instructional Unit
3. Low Temperature Test Lab
4. Skeleton Plant Steam Flow Studies
5. Capillary Air Conditioner
6. Duplex Pump
7. Air Compressor
8. Pneumatic Diesel
9. Gas Engine
10. Diesel Engine
11. Gas Engine
12. Boiling Water Heat Transfer Loop
15. Steam Engine
16. High Pressure Steam Generator
17. Educational Unit
18. High Temperature Hot Water Research
19. Hilsch Tube
20. Turbines
21. Steam Jet Refrigeration
22. Vapor Compression Refrigeration



The fields of mechanical and industrial engineering are interrelated and in some areas complementary. The mechanical engineer is primarily concerned with the conversion and transmission of energy. This may manifest itself in many phases: research, development, and production. It is in the production phase that interrelation between the two fields is most clearly exemplified.

The mechanical engineer, through his training in thermodynamics, machine design, and production processes, is concerned with the design, construction, and operation of mechanical equipment. The industrial engineer through his training in planning, control, and operations research is concerned with the integration of men, materials, and equipment in order to provide the most efficient and economic implementation of existing resources.

These fields are ever expanding through new developments and possibilities of energy conversion by nuclear, thermoelectric, thermionic, magneto-hydrodynamic, and photoelectric means. These possibilities are further expanded by new developments in work analysis and data processing. The interrelation initially mentioned clearly exists and should continue to exist as these new concepts become commonplace and each field continues its quest for significant developments.